# RESEARCH NEWSLETTER AT THE BANK OF ALBANIA

**Contents**



*This newsletter presents a short summary of the Bank of Albania's research projects during 2019 H2. More concretely, it reflects the most recently concluded research papers, research work in progress, articles, and the key research activities organized mainly by Bank of Albania's economists in the course of this period.*

## I. RESEACH PAPERS

### 1.1. RECENTLY CONCLUDED RESEARCH PAPERS

During this period the scientific research at the Bank of Albania consisted of empirical studies and analyses on: banking sector situation, structure and decision-making; the increase of lending and non-performing loans; the efficiency of monetary policy and its transmission mechanism; as well as global and euro area challenges and their transmission to the Albanian economy and financial market. A short summary is presented below.

***"The global lending and the financial shocks of the euro area: Their importance for Albania", by Bledar Hoda, Research Department.***

Economies with open capital and financial markets with a high degree of euroization or a large presence of foreign banks are predisposed to be more affected by foreign macro-financial factors or global scale liquidity fluctuations. This paper assesses to what extent the impact of these factors has materialized in the last two decades in Albania. The scale of the impact is assessed through a Bayesian Vector Autoregressive (BVAR), which allows the exogenous of a series of euro area business and financial cycle indicators against business and financial cycle indicators in Albania. The results suggest that the fluctuations of foreign indicators, 'global liquidity' and 'euro area business and financial cycle indicators', respectively, can explain around 60-80% of the fluctuations of the macro-financial indicators of the Albanian economy included in this paper, where just 'global liquidity' explains around 40-50% of aggregate demand cycles and around 1/3 of Albania's lending to GDP behaviour.

***"Concentration, competition and financial stability in the Albanian banking sector. Significant policy implications?, by Gerti Shijaku, Research Department.***

The developments that led to the 2007

financial crisis have once again aroused the interest in studying the factors that determine banking stability, in particular in analysing the issues related to the significant implications of policies against the concentration and competitive behaviour of banks. The paper identifies the most suitable synthetic indicators to better measure the issues related with banking competitiveness and stability. On the other hand, it presents a review of the literature, including as well the empirical findings of the current research in the case of the Albanian banking system. In conclusion, the paper examines the significant policy implications based on empirical findings and in support of future challenges to push for new corrective rules and policies, which may be necessary to avoid or address the issues that arose during and after the financial crisis and to ensure that current policies related to the promotion of competitiveness are not the source for tomorrow's issues.

***"The impact of external macroeconomic factors on the non-performing loans of the banking system.", by Bledar Hoda, Research Department.***

The non-performing loans ratio (NPLR) to outstanding loans is a common ex post indicator of credit risk. Given that markets rely on credit risk measurements to form expectations, the credit risk indicator plays an important role in the economy. The upward tendency of NPLR has at least to direct consequences in the ability of the banking system to finance the economy and in the macroeconomic equilibrium. On one hand, NPLR erodes banks' Capital Adequacy Ratio and leads to a decrease of the lending capacity. On the other, the increase of NPLR may be an indicator that borrowers are already mired in a high level of debts, keeping them away from banks. The results suggest that the exchange rate has a significant impact on the non-performing loan ratio.

***"A VAR analysis on the monetary policy transmission mechanism in Albania. How does the Central Bank's REPO rate affects the economy?", by Denada Rada, Research Department.***

The objective of this paper is to analyse the channel of the interest rate transmission mechanism of the monetary policy in Albania, studying the impact of the 7-day REPO rate on the macroeconomic indicators: GDP, inflation, the M3 monetary aggregate and the ALL/EUR exchange rate, by using the data of the period 2002-2018. A comprehensive assessment of Albanian economy REPOs to other relevant variables has been demonstrated. This model assumes a recursive system and uses the Cholesky decomposition identification scheme.

***"Short-term inflation forecast Albania through a Bayesian VAR model", by Meri Papavangjeli, Research Department.***

This paper analyses the appropriateness of a Bayesian VAR model (BVAR) to predict inflation in Albania, which differently from the standard models with autoregressive vectors (VAR) allows the flexible inclusion of a wide range of indicators, leading to a more comprehensive explanation of inflation. BVAR is designed as mid-size model that describes the more significant dynamics and interactions among the definer of inflation in Albania, taking into account the developments in the real, financial and foreign sectors from 2002 Q2 to 2018 Q4. The results show that BVAR outperforms the benchmark univariate

models and unconditional VARs at several forecast sample time horizons. However, the lead is moderate, since the changes in the forecasting performance among the different models are statistically negligible.

***"Microeconomic evidence on price-setting behaviour in the Albanian economy", by Ola Çami, Research Department.***

This paper aims to analyse price behaviour in Albania during the period 2008-2019 based on the calculations of three main indicators: frequency, quantity and stability of price adjustments. The paper uses CPI (Consumer Price Index) disaggregated data and simple statistical calculations to provide evidence on price rigidity and the heterogeneity of the behaviour among the different consumer basket groups. The results suggest that prices are moderately rigid and change in average every four to five months. The price-setting behaviour is heterogeneous in the goods range, where overall the prices of services are more rigid than the prices of goods. The paper also finds that downward price rigidity has eased after 2012.

***"Exchange rate changes and money demand in Albania. A non-linear analysis based on the ARDL approach", by Mohsen Bahmani-Oskooee (University of Wisconsin - Milwaukee), Ilir Miteza (University of Michigan - Dearborn) and Altin Tanku (Research Department).***

This paper contributes to a new approach to test short and long-term impacts of money demand volatility in Albania, a small, open economy without deep financial markets. More specifically, we examine the case of asymmetrical impacts of the exchange rate volatility on money demand using a non-linear adjustment mechanism within an ARDL model. By using 1996-2016 data from Albania, we show that money demand has been stable both in the linear and non-linear specification. The non-linear model reveals an asymmetrical impact of the exchange rate in money demand, with depreciation that decreases money demand, likely due to a substitution impact of a relatively dollarized economy. The paper is published in the magazine "Economic Change and Restructuring Empirical and Policy Research on the Transitional and Emerging Economies, 2020.

## 1.2. RESEARCH PAPERS IN PROGRESS

***"Forecast of Albanian time series with linear and non-linear models?", by Blerina Vika, Department of Informatics and Statistics, Faculty of Economics, University of Tirana and Ilir Vika, Research Department, Bank of Albania.***

The paper attempts to contribute to the literature on non-linearity, evaluating the forecasting ability of non-linear methods compared with the performance of known linear models. The latter are represented by linear autoregressive models (AR), while non-linear methods are based on the techniques of changes in time with smooth transition autoregressive models (STAR) and artificial neural network models (ANN). Our analysis focuses on four statistical series - consumer price, GDP, interest rate and exchange rate - which are often used in various macroeconomic models and their performance is subject to periodic discussion by policy makers. Methodologically, the paper relies only on single-variable models, and leaves the treatment of multi-variables specifications for further studies. Preliminary

findings suggest that non-linear methods rank first in most off-period forecasts. The results are presented for both forecast horizons, one and four quarters. However, AR linear models appear to improve their ranking, such as: forecast errors of second and third degree. Nevertheless, the analysis sheds light on the potential of non-linearity in various indicators of the Albanian economy, suggesting that use of alternatives beyond linear assessments may have value added.

***"Behaviour of Albanian households in terms of personal finances and consumption: Evidence from "Albanian Household Finances and Consumption Survey", by Elona Dushku and Ola Çami, Research Department.***

In order to meet its objectives, the Bank of Albania conducted for the first time the "Albanian Household Finances and Consumption Survey", based on the survey conducted by the European Central Bank. The survey is organized in 8 main section containing: (i) general information on household composition (ii) household's real estate and gathering information on mortgages related to the principal and other habitations, (iii) information on other household's liabilities, (iv) information on household's financial assets, (v) on employment, (vi) income of each individual over 16 years old, as well as household income, (vii) information on inheritances and gifts, (viii) information on household behaviour towards consumption and savings. The survey was conducted on-site by INSTAT during March-April 2019 and aimed at collecting the information of 2.500 Albanian households randomly distributed throughout the territory of Albania. The data collected will serve to study mostly the behaviour of Albanian households regarding wealth, its value, composition and distribution by households and geographical areas, but also to improve and expand economic analyses and the formulation of policies in terms of monetary policy, financial stability, inequality, financial education and financial inclusion.

***"Survey on measuring financial literacy: Analysis of the results for Albania, 2019", by Arlinda Koleniço, Kliti Ceca and Egnis Isaku, Research Department.***

After the surveys of 2011 and 2015, the Bank of Albania has for the third time collected and published the data related with the level of financial literacy in Albania. The survey "Financial Literacy in Albania" is based on the directives and methodology of OECD/INFE and was realized in cooperation with INSTAT during September-October 2019. At the end of this survey, the collected indicators will be analysed, as well the comparative analysis with the data from the previous years. The data collected by this survey constitute significant information for the identification of issues that need attention and intervention through financial literacy projects.

***"What drives the euroization of deposits in Albania?", by Denada Rada, Research Department.***

This paper seeks to examine the reason why the euro continues to be strong in the Albanian financial system. Even though economic conditions appear to have improved and there is no risk of high inflation, people are inclined to use deposits in foreign currency against those in the national currency. The paper examines the main drives of financial euroization in Albania during 2002-2019, by using quarterly data from the Bank of Albania.

***An investigation on how economic growth and the "Flow" series of the labour market explain the unemployment rate", by Orion Garo, Research Department.***

This paper focuses on providing an econometric tool on the relation between the unemployment rate, economic growth and the indicator of gross and net labour market flow series in Albania. The analysis uses a VAR specification to explain the variability that the unemployment rate receives from simulated shocks in each of the labour market flow series.

### 1.3. ARTICLES

***"The future of banking in Albania and in the CESEE region. An analysis of future challenges and opportunities", by Ola Çami, Bank of Albania.***

This article aims to analyse the latter developments in the financial market of Central, Eastern and South East Europe and particular in Albania, by analysing future challenges and opportunities of the banking system. The banking system in Albania is well-capitalized and has satisfactory liquidity. Non-performing loans have shown a strong downward trend in recent years, but the recovery of lending and the profitability of the banking system is still a challenge for banks and policy makers. In the context of a global economic slowdown, an environment characterized by low interest rates and a technological "boom" that is expected to radically change the business model of banks, the future of the banking system in the region and in Albania is not expected to be the same.

***"Households and remittances: Evidence from "Albanian Households Finances and Consumption Survey", by Elona Dushku, Research Department.***

This article is based on the data of the survey on Albanian households' finances and consumption, carried out by the Bank of Albania during 2019, and analyses the characteristics of remittance expectant households and their impact on the income level, consumption and saving behaviour of Albanian households. Survey data show that during 2018, 23% of Albanian households received remittances. The average annual flow of remittances per household is estimated at approximately EUR 2.018 euro and varies from region to region. As a number of households, the households of the regions of Tirana, Elbasan and Vlora received more remittances. Whereas, based on the amount of remittances, the largest beneficiaries are Elbasan, Tirana and Durrës. It is estimated that remittances are an important source of income for Albanian households. Survey data also show a low financial inclusion of households in Albania, and mainly those that receive remittances. The article is part of the "Diaspora and Remittances" Magazine. https://www.bankofalbania.org/Botime/Botime_te_vecanta/Diaspora_dhe_Pagesat.html

## II. ARTICLES FROM OTHER CENTRAL BANKS

***"Central banking in challenging times", by Claudio Borio, BIS***

Starting from the financial crisis, central banks have faced three significant challenges: economic, intellectual and institutional. The institutional challenge has to do with the heavily criticism that the central bank - an important institution - is

facing. The essay examines these issues from a historical perspective and compares the current situation with the arising and ebbing of central bank's independence in the past. It suggests that this institution is firmly linked with globalisation, since both derive from the same source: an intellectual and political environment that supports an open system, where countries respect the same principles and governments maintains a certain distance from the functioning of a market economy. This suggests that the fate of the independence is also linked with that of globalisation. The essay goes on to explore ways to help protect the independence. A key way is to narrow the growing gap between what central banks are expected to do and what they actually do. In this context, the author also considers and rejects the utility of the recently proposed schemes in relation to controlled deficit monetization.

https://www.bis.org/publ/work829.htm

***"Has globalization changed the inflation process?", by Kristin Forbes, BIS***

The link between unused capacities and inflation, key in inflation models, seems to have weakened. Do we need a new approach? This paper uses three very different approaches - the principal component, a Phillips-curve based framework, and a trend-cycle decomposition - to show that inflation models need to control more explicitly and comprehensively the changes in global economy and to allow for key parameters to adjust in time. Global factors, like global commodity prices, untapped capacities, the exchange rate and pricing competition all affect inflation significantly, even after being check for internal standard variables. The role of these global factors has changed over the last decade, in particular the relation between global untapped capacities and commodity prices, as well as the producer price dispersion with CPI inflation and the cyclical inflation component. The role of different global and domestic factors varies across countries, but as the world is more integrated through trade and supply chains, global factors no longer have to play a supporting role in dynamic models of inflation.

https://www.bis.org/publ/work791.htm

***"The macroeconomic effects of international uncertainty", by Jesús Crespo Cuaresma, Florian Huber, Luca Onorante, European Central Bank.***

This paper proposes a Bayesian VAR model with stochastic factor to examine the macroeconomic consequences of the shock to international uncertainty in G7 countries. The uncertainty factor structure allows the authors to identify an international uncertainty shock, assuming that it is the common volatility process that determines the variance-covariance matrix dynamics of common factors. In order to allow for a first and second shocks moments, the authors also assume that the uncertainty factor is introduced into the VAR equation as an additional variable. The findings suggest that the degree of uncertainty measured is strongly correlated with the volatility of the international capital price, closely following other well-known and adopted methods of measuring uncertainty. The dynamic response of a set of macroeconomic and financial variables indicates that an international uncertainty shock exerts significant effects on all economies and indicators considered.

https://www.ecb.europa.eu/pub/pdf/.

***"Fragmentation in global financial markets: good or bad for financial stability?", by Stijn Claessens, BIS.***
Numerous regulatory reforms following the financial crisis of 2007-2009 have often been designed and adopted through an international cooperation process. As such, actions have tended to harmonize national approaches and minimize inconsistencies. However, some market participants and policy makers have recently raised concerns about an unwanted and unnecessary increase in fragmentation in financial markets globally, with potentially adverse effects on financial stability. This paper examines the extent of fragmentation in different markets and classifies possible causes. Furthermore, it examines whether fragmentation is necessarily detrimental to financial stability, suggesting that a number of trade-offs are more likely. In order to identify and evaluate opportunities for improvement, Pareto, the author, concludes by highlighting areas that need further analysis.
https://www.bis.org/publ/work815.htm

## III. RESEARCH ACTIVITIES

### 2.1 FRIDAY SEMINAR

***"Albania's medium-term forecasting model", by Eglent Kika and Olta Mitre, Monetary Policy Department, Tibor Hledik, Joint Vienna Institute.***
This paper presents a detailed description of the Medium-term Forecast Model (MFM) within the IMF technical assistance. The MFM model, originally created in 2011, serves as the basic econometric infrastructure within the Bank of Albania's Forecasting and Policy Analysis System (FPAS) to inform and support the monetary policy decision-making process.

***"Financial literacy in Austria: Summary of the most recent survey results", by Maria Silgoner, Chief Economist at the Bank of Austria's Foreign Research Sector.***
This paper summarizes the main findings of recent studies based on OECD data on adult financial literacy and the Austrian Survey of Financial Literacy (ASFL). ASFL is the Austrian contribution to the exercise of OECD financial literature data, which has a broad focus and includes aspects of financial literacy, behaviour and attitude.

***"Key risks to Cyber Security", by Xhilda Kanini, Enkli Ylli and Aida Mollaj, Information Technology Department***
This paper summarizes guidelines for identifying informatics risks, protecting against them, enhancing security and efficiency in the use of technology in the workplace, but also in private life.

### 2.2 RESEARCH PRESENTATIONS

***"Did the crisis change the Monetary Transmission Mechanism in Albania? An application of the kernel density assessment technique", by Altin Tanku, Research Department, at the International Conference on "Economic Modelling and Data Science", Azores, Portugal 2019.***
The period post-financial crisis in the Albanian economy was characterized by

low inflation and slow growth. In response to the inflation and output gap, the Bank of Albania has lowered its monetary policy rate to support economic activity and bring inflation to target. This presentation investigates the hypothesis that the relationship between interest rate, money and inflation has changed in the post-financial crisis period in Albania, based on the Kernel density assessment technique.

***"Fiscal policy, output and financial stress in developing countries in Central, East and South East Europe: A VAR threshold approach", by Gerti Shijaku, Research Department, at the 7th Conference organized by BCC "Interaction between fiscal and monetary policy ", Geneva (Switzerland), 26-27 September 2019.***

This presentation analyses the effects of fiscal developments on the economic activity and market situation over time. The study uses a vector autoregressive threshold approach for 10 developing economies in Central, East and South East Europe. The financial stress index is constructed taking into account a wide range of market patterns, including stress related with banks, currency market, foreign exchange and real estate markets, on which the threshold of market situation is raised. The VAR model threshold allows this correlation to be analysed during episodes of economic downturn and stress in the financial market. Finally, empirical analysis considers a structural identification approach.

***"An Empirical assessment of the Effects of Fiscal Policy on the Albanian Economy", by Meri Papavangjeli, Research Department, at the 7th Conference organized by BCC "Interaction between fiscal and monetary policy", Geneva (Switzerland), 26-27 September 2019.***

This presentation studies the effects of fiscal policy on the Albanian economy during the period 1998 Q1-2018 Q2, on one hand using a structural VAR model for identifying fiscal policy shocks, as proposed by Blanchard and Perotti (2002), and on the other, the Projection Local Method for the calculation of impulse response functions. Estimated results show that a tax revenue shock has a higher impact on economic activity compared to a government spending shock in the short-term, while its effect extends over longer time horizons. Capital expenditures and government purchases have a similar impact on GDP, but the effects of capital expenditures are more extended over time. Given this, medium-term policies may minimize the adverse impact of fiscal consolidation on economic growth by offsetting some current spending cuts with increased capital spending.

***"Interaction between fiscal and monetary policy, impact on financial stability", presentation by Altin Tanku, Research Department, presented at the 7th Conference organized by BCC. "Interaction between fiscal and monetary policy ", Geneva (Switzerland) 26-27 September 2019.***

The purpose of this presentation was to discuss the interaction between monetary and fiscal policy, as well as the impact that these policies have on financial stability, taking into account the case of Albania.

***"Preliminary Results from the Albanian Wealth Survey", by Elona Dushku, Research Department, presented at the annual meeting of the Households Finance and Consumption Network, organized by***

***the European Central Bank, Frankfurt, (Germany), 18-19 November 2019.***

On November 18-19, 2019, the European Central Bank organized the annual HFCN meeting, attended by representatives from central banks of all euro area countries, as well as various international scientific research institutions, which presented some of their work in relation to data obtained from the Household Finance and Consumption Survey (HFCS). The Bank of Albania, at the beginning of 2019, conducted such a survey for Albanian households. The material presented at this meeting on the topic "Preliminary Results from the Albanian Wealth Survey", aimed to present the Bank of Albania's methodological approach on the Albanian Household Finance and Consumption Survey, similarities and differences with the questionnaire followed by other European Union banks. In addition, were presented some preliminary results regarding the characteristics of Albanian households, the household reference person, and the types of real and financial assets owned by households during 2019.

## 2.3 13TH REGIONAL RESEARCH MEETING IN SOUTH EAST EUROPE

On 5-6 December 2019, the Bank of Albania organized the 13th Economic Research for South East Europe Meeting to support and promote economic research, as well as enhance regional cooperation in South East Europe and beyond in the field of central banking.

During this activity, researchers presented their studies on general economic and financial topics, as follows:

- *Theoretical and empirical aspects of monetary policy and macro-prudential policy, as well as their interrelationships;*
- *Financial and digital innovation and the implications for the banking system and financial stability;*
- *Macroeconomic models for policy and forecast analysis;*
- *Bank lending, interest rate and regional impact;*
- *Exchange rate regimes and implications for economic growth and welfare;*
- *External Sector: trade, remittances and implications for national welfare;*
- *Public sector and fiscal policy structure*

In more detail, the works presented during this activity are as follows:

- *Macro-prudential and Monetary Policy: The need to dance harmoniously tango", by Yannick Lucotte, (SB Paris School of Business);*
- *An extended framework - The sensitivity of banks' net margin interest rates to monetary conditition in CESEE" by Julia Wörz, Katharina Allinger, (Bak of Austria);*
- *ECB announcements and stock market volatility", by Frederik Neugebauer, (WHU Otto Beisheim School of Management);*
- *"Financial spirals in developing economies: the role of exchange rate and domestic fundamentals", by Alessio Ciarlone, (Bank of Italy);*
- *Exit from exchange rate regimes and duration of economic recovery: A Propensity Score Matching approach", by Maria Siranova (University of Economy in Bratislava, Slovakia;*
- *The challenges of digital transformation in the banking sector", by Brankica Todorović, (School of Economy, Užice, Serbia);*

- *"Benefits to national welfare in monetary unions", by Cem Gorgun (PhD candidate in Economics, Koc University Rumelifeneri Campus);*
- *"Welfare expectations, habits and dynamic benefits from trade", by Povilas Lastuakas, (Bank of Lithuania);*
- *"Space Dependency and Internal Capital Markets", by Mimoza Shabani, (Lecturer of Financial Economics, University of East London);*
- *"The impact of remittances on Albanian households poverty and consumption", by Elona Dushku, (Bank of Albania);*
- *Foreign currency debt and fiscal multiplier", by Grégory Levieuge, Marie-Pierre Hory, Daria Onori, (Bank of France);*
- *"Attitudes towards public debt creation and public expenditure advantages in CESEE", by Thomas Scheiber, Markus Eller, (Bank of Austria);*
- *"The macro economy of the 'carry trade' has gone wrong: corporate and consumer losses in emerging Europe", by Eglė Jakučionytė, (Bank of Lithuania);*
- *"An analysis of concentration, competition and financial stability in the banking context of South East Europe", by Francesco Guidi, (Lecturer of Economics at the University of Greenwich);*
- *"Trusting the bankers: Analysis of credit channel demand and supply factors in the case of Albania, based on information from the Bank Lending Survey", by Gerti Shijaku, (Bank of Albania);*
- *"An analysis of institutional financial intermediation risk through national financial accounts and Balance of Payments: Evidence from Indonesia", Werdaningtyas H, Awirya AA, Rudianto, (Bank of Indonesia);*
- *"Global lending and the financial shocks of the euro area: Their importance for Albania", by Bledar Hoda, (Bank of Albania);*
- *"Microeconomic evidence on price-setting behaviour in the Albanian economy", by Ola Çami, (Bank of Albania);*
- *"A VAR analysis on the monetary policy transmission mechanism in Albania. How does the Central Bank's REPO rate affects the economy?", by Denada Rada, (Bank of Albania);*
- *"Inflation: An Occult Incentive?", by Vincenzo Alfano, (University of Naples Federico II);*
- *"Relation between unemployment and real economic growth in Albania", by Orion Garo, (Bank of Albania);*
- *"What drive the volatility of the exchange rate ALL-EUR? A co-integrated SVAR approach to identify shocks to the economy", by Altin Tanku, Ilir Vika, (Bank of Albania);*
- *"Structural reforms and ambition for growth", Natasha Rovo, (World Bank);*
- *"Healthcare and Macroeconomics: Productivity, inflation and monetary policy", Peter Hilserath, (University of the Pacific);*
- *"Short-term inflation forecast Albania through a Bayesian VAR model", by Meri Papavangjeli, (Bank of Albania);*
- *"A comparison of mixed frequency approaches for the short-term forecast of North Macedonia's GDP", by Gani Ramadani, Magdalena Petrovska, (National Bank of North Macedonia).*

The full presentations can be found at the Bank of Albania website at the following link.

https://www.bankofalbania.org/Publications/Research/Regional_research_meeting_in_South-east_Europe.html

## 2.4 GOVERNOR'S AWARD FOR THE BEST DIPLOMA THESIS 2019

The Bank of Albania, in the framework of encouraging students of economics both at home and abroad to engage in high quality scientific research in various fields of economics and finance, organized in 2019 as well the open competition of "Governor's Awards for the Best Diploma". The competition was attended by students from universities both at home and abroad, with topics related to monetary and international economics, price and financial stability, economic integration etc.

The first prize went to Olsi Pajo, a Master's student at the University of Bonn in Germany on the topic: "Transmission of Central Bank Information", a key issue for central banks, which pursue a monetary policy based on public expectations. The author builds a theoretical model to argue about the implications that central bank objectives have on the role of competence and transparency in communication strategy. Based on the theoretical model, he finds that central bank competence improves the communication process as it is more careful in monitoring the economic situation and therefore is also more reliable. But on the other hand, to be transparent it must also have a clear and well-defined objective.

The second prize was awarded to Meril Canameri, from the Faculty of Economics in Tirana, on the topic: "Level, importance and responsibility of financial literacy in Albania". The purpose of this paper is to assess what is to be done in the future to improve the financial literacy by assessing its current situation in Albania. Financial literacy and financial inclusion are key elements for a better transmission of central bank's policies, as well as achieving the objective of price stability.

The third price was awarded to Isli Kola, student at the University Bilken in Ancara, Turkey, on the topic: "A structural and statistical assessment of potential output in Albania". The author calculates Albania's potential output for the period 1980-2017, using four different empirical approaches. Estimates obtained by the author indicate that negative shocks to production are gradually absorbed by the economy and that in recent years production is converging towards its potential.

## IV. LINKS OF OTHER INSTITUTIONS:

***Banca d'Italia***
(http://www.bancaditalia.it/studiricerche)

***Bank of Canada***
http://www.bankofcanada.ca/research/

***Banco de Espana***
(http://www.bde.es/informes/be/docs/docse.htm)

***Bank of England***
(http://www.bankofengland.co.uk/publications/workingpapers/index.htm)

***Bank of Finland***
(http://www.bof.fi/en/julkaisut/bofit_julkaisut/index.htm)

***Bank of Greece***
(http://eng.bankofgreece.gr/en/publications/research.asp)

***BIS Central Bank Research Hub***
(http://www.bis.org/cbhub/index.htm

***Czech National Bank***
(http://www.cnb.cz/en/research/))

***Deutsche Bundesbank***
(http://www.bundesbank.de/vfz/vfz_diskussionspapiere_2009.en.php)

***European Central Bank***
(http://www.ecb.int/home/html/researcher.en.html)

***Federal Reserve***
(http://www.federalreserve.gov/econresdata/default.htm)

***International Journal of Central Banking***
(http://www.ijcb.org/)

***National Bureau of Economic Research***
(http://www.nber.org/)

***International Monetary Fund***
(http://www.imf.org/external/pubind.htm)

***Oesterreichische Nationalbank***
(http://www.oenb.at/en/presse_pub/research/research.jsp)